

LOW DROP OR-ing POWER SCHOTTKY DIODES

MAIN PRODUCT CHARACTERISTICS

$I_{F(AV)}$	2*40 A
V_{RRM}	10 V
$V_F (max)$	0.33 V

PRELIMINARY DATASHEET

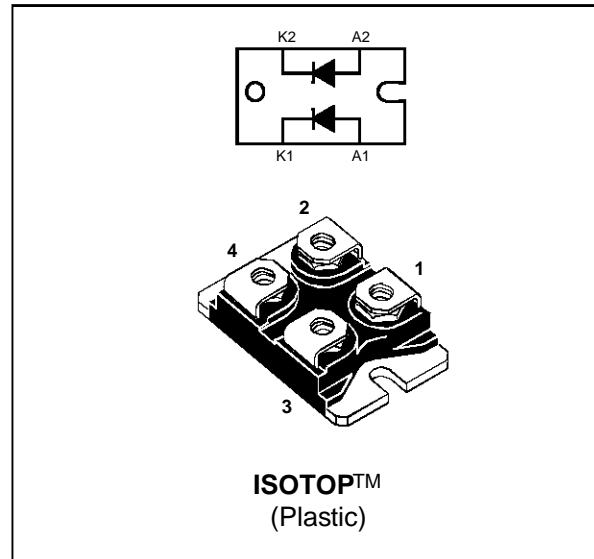
FEATURES AND BENEFITS

- VERY LOW DROP FORWARD VOLTAGE FOR LESS POWER DISSIPATION AND REDUCED HEATSINK
- OPTIMIZED CONDUCTION/REVERSE LOSSES TRADE-OFF WHICH MEANS THE HIGHEST YIELD IN THE EQUIPMENTS

DESCRIPTION

Dual Schottky rectifier suited for Switched Mode Power Supplies and DC to DC power converters.

Packaged in ISOTOP, this device is especially intended for use as an OR-ing diode in fault tolerant Power Supplies equipments.



ABSOLUTE RATINGS (limiting values) PER DIODE

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		10	V
$I_{F(RMS)}$	RMS Forward Current		100	A
$I_{F(AV)}$	Average Forward Current	$T_c = 80^\circ\text{C}$ $\delta = 0.5$	40	A
I_{FSM}	Surge Non Repetitive Forward Current	$t_p = 10 \text{ ms}$ Sinusoidal	700	A
I_{RRM}	Repetitive Peak Reverse Current	$t_p = 12 \mu\text{s}$ $F = 1\text{KHz}$	2	A
T_{stg}	Storage Temperature Range		- 65 to + 150	$^\circ\text{C}$
T_j	Max. Junction Temperature		100	$^\circ\text{C}$
dV/dt	Critical rate of rise of Rise Voltage		1000	$\text{V}/\mu\text{s}$

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STPS80L10TV

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R _{th(j-c)}	Junction to Case Thermal Resistance	Per diode	1	°C/W
		Total	0.55	
R _{th(c)}	Coupling Thermal Resistance	Coupling	0.1	

STATIC ELECTRICAL CHARACTERISTICS (per diode)

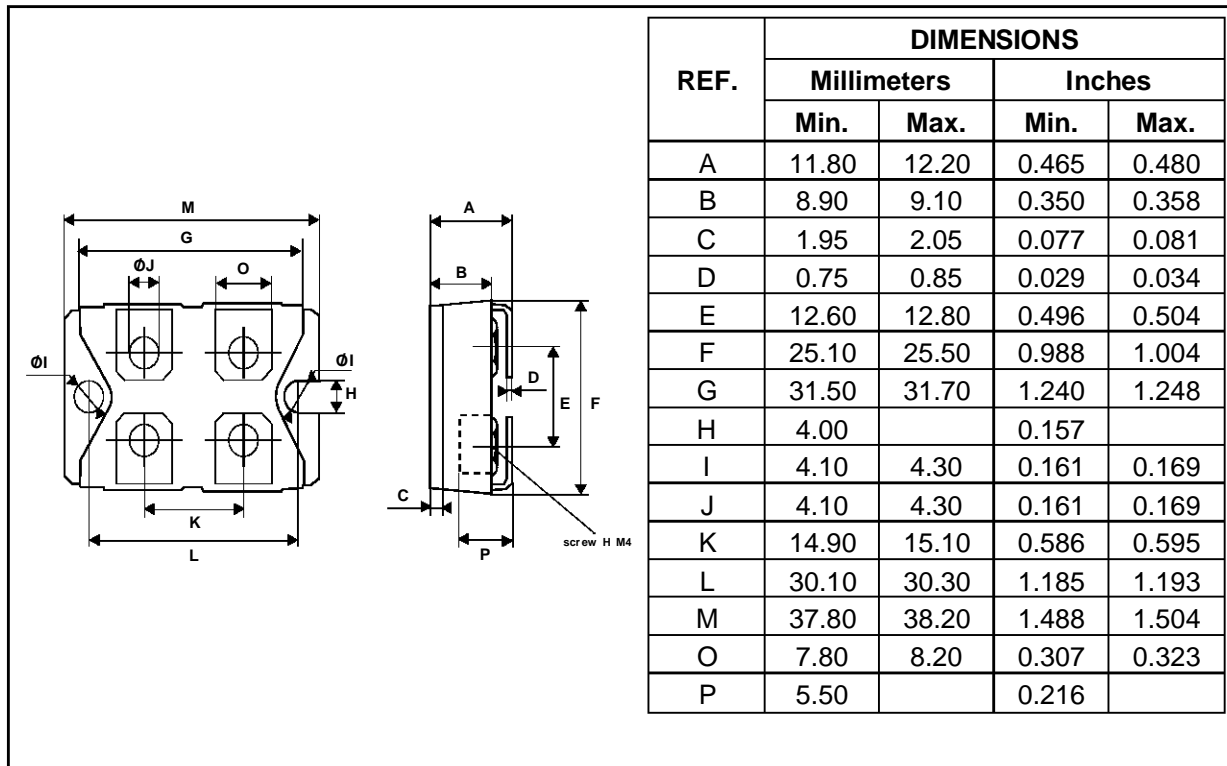
Symbol	Parameter	Tests Conditions		Min.	Typ.	Max.	Unit
I _R *	Reverse leakage Current	T _j = 100°C	V _R = 5V		220		mA
		T _j = 25°C	V _R = 10V			11	mA
		T _j = 100°C			0.32	1.1	A
V _F *	Forward Voltage drop	T _j = 25°C	I _F = 40 A			0.43	V
		T _j = 100°C	I _F = 40 A		0.28	0.33	

Pulse test : * tp = 380 μs, duty cycle < 2%

To evaluate the conduction losses use the following equation :

$$P = 0.19 \times I_{F(AV)} + 3.25 \cdot 10^{-3} \times I_{F(RMS)}^2$$

Typical junction capacitance, V_R = 5V F = 1MHZ T_j = 25°C : 4nF

PACKAGE MECHANICAL DATA
 ISOTOP


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